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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,080	02/15/2001	Stephen P.W. Draper	5543-00301/EBM	3076

7590 02/09/2005
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EXAMINER

YUAN, ALMARI ROMERO

ART UNIT PAPER NUMBER

2176

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/785,080	DRAPER, STEPHEN P.W.	
	Examiner	Art Unit	
	Almari Yuan	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is responsive to communications: Amendment filed on 9/20/04.
2. Claims 42-44 are newly added. Claims 1-44 are pending in the case. Claims 1, 14 and 28 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bittinger et al. (USPN 5,859,971 – filed 02/1996) in view of Balcha et al. (USPN 6,233,589 B1 – filed on 07/1998).**

Regarding independent claims 1, 14, and 28 and (dependent claims 2, 12-13, 15, 26-27, 29, and 40-41),

Bittinger discloses:

A method of reducing a size of data difference representations, the method comprising:

Bittinger discloses “identifying an original version of an input data stream in an original form and identifying an updated version of the input data stream in the original form”, on col. 3, lines 28-67 and col. 4, lines 39-67 teaches determining if the received data stream is identical to

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the cache entry and determining if the received data stream is different from the cache entry to create a plurality of difference data sets);

Bittinger discloses “dividing the original form of the original version of the input data stream into separate original version output streams through the use of a pre-processor form and dividing the original form of the updated version of the input data stream into separate updated version output streams through the use of a pre-processor form”, on col. 27, lines 44-64 teaches the data stream may be demultiplexed to create a plurality of HTTP data stream); and

produce data difference representations (Bittinger on col. 3, lines 54-58 teaches the difference data is sent to the second computer over the external communication link and the difference data transmitted over the external communication link sent by the client computer is acquired from the external communication link and on col. 4, lines 39-46 teaches archival difference data).

However, Bittinger does not explicitly disclose “differencing each of the separate updated version output data streams with a corresponding original version output data stream”.

Balcha discloses “differencing each of the separate updated version output data streams with a corresponding original version output data stream”, on col. 8, line 64 – col. 9, lines 51 teaches differencing mechanism between unmodified stream (original) and modified stream (updated).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Balcha into Bittinger to provide a way to difference between an unmodified stream and a modified stream, as taught by Balcha, incorporated into the

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differencing system of Bittinger, in order to prevent to copy the entire base file and to reduce network traffic.

Regarding dependent claims 3, 17, and 30, Bittinger discloses:

reconstructing the separate updated version output data streams from the data difference representations and the original version output data streams (Bittinger on col. 3, lines 48-67 teaches reconstructed data stream corresponding to the intercepted response from data difference between the intercepted response and server base form); and

combining the separate updated version output data streams into the original form of the updated version of the input data stream through the user of a post-processor (Bittinger on col. 4, lines 1-15 teaches combining the sever base form received over the link with the difference data received over the link to create a data stream).

Regarding dependent claims 4, 18, and 31, Bittinger discloses:

wherein the original form of the original version of the input data stream is empty (Bittinger on col. 10, lines 55-59 teaches empties from the temporary storage the HTTP data stream received by the web server).

Regarding dependent claims 5, 19, and 32, Balcha discloses:

decompression algorithms (Balcha on col. 2, line 28 teaches compression/decompression algorithms).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Balcha into Bittinger to provide a way to difference between an unmodified stream and a modified stream, as taught by Balcha, incorporated into the

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differencing system of Bittinger, in order to prevent to copy the entire base file and to reduce network traffic.

Regarding dependent claims 6, 20, and 33, Bittinger discloses:

separate volatile components of the input data stream from less volatile components (Bittinger on col. 10, lines 39-59 teaches the received data stream is temporarily stored to interrogates components of the data stream to determine differences).

Regarding dependent claims 7, 21, and 34, Bittinger discloses:

the input data stream is executable code (Bittinger see Abstract teaches the data stream is executed by the first application).

Regarding dependent claims 8, 22, and 35, Bittinger discloses:

branch targets (Bittinger on 10, lines 39-59 teaches interrogating the received HTTP data stream).

Regarding dependent claims 9, 23, and 36, Balcha discloses:

data address (Balcha on col. 9, lines 15-51 teaches base address of the stream).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Balcha into Bittinger to provide a way to difference between an unmodified stream and a modified stream, as taught by Balcha, incorporated into the differencing system of Bittinger, in order to prevent to copy the entire base file and to reduce network traffic.

Regarding dependent claims 10, 24, and 37, Balcha discloses:

instruction code (Balcha on col. 9, lines 40-45 teaches byte codes).

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Balcha into Bittinger to provide a way to difference between an unmodified stream and a modified stream, as taught by Balcha, incorporated into the differencing system of Bittinger, in order to prevent to copy the entire base file and to reduce network traffic.

Regarding dependent claims 11, 25, and 38, Balcha discloses:

immediate data (Balcha on col. 9, lines 5-11 shows data within two different streams).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Balcha into Bittinger to provide a way to difference between an unmodified stream and a modified stream, as taught by Balcha, incorporated into the differencing system of Bittinger, in order to prevent to copy the entire base file and to reduce network traffic.

Regarding dependent claim 16, Bittinger does disclose pre-processor is located in the first computer system and post-processor is located in the second computer system (See Figure 2).

Regarding dependent claims 42-44, Bittinger discloses the dividing steps on col. 27, lines 44-64. Balcha discloses “parsing the input data stream according to data type of the data stream”, on col. 6, lines 31-33 teaches each stream is divided into blocks and on col. 9, lines 5-14 shows blocks of data with data type A and B in an unmodified stream S comparing with blocks of data with data type A, D, and B in the modified stream S’ to determine the differences between both versions of streams.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Balcha into Bittinger to provide a way to difference

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between an unmodified stream and a modified stream, as taught by Balcha, incorporated into the differencing system of Bittinger, in order to prevent to copy the entire base file and to reduce network traffic.

Response to Arguments

5. Applicant's arguments filed 9/20/04 have been fully considered but they are not persuasive.

Regarding Applicant's remarks on page 9:

Bittinger does disclose "dividing input data stream into separate streams", col. 27, lines 44-64 teaches the data stream may be demultiplexed to create a plurality of HTTP data stream. The multiplexing and demultiplexing of Bittinger is used for input/output operations for transmitting a number of separate data streams for communications; on col. 27, lines 53-56 and 60-64 teaches in a client/server environment data streams are demultiplexed into a plurality of data streams.

Regarding Applicant's remarks on page 10:

Bittinger does teach producing data difference representation, on col. 3, lines 54-58 and col. 4, lines 39-46 teaches producing difference data from the plurality of data streams.

Bittinger's invention helps to reduce the data transmitted over communication link by determining the difference data sent over the communication link and by reconstructing the response data stream (input) by combining the client base cache entry with the difference data (See Abstract).

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Referring to claims 6, 20, and 33, Bittinger does disclose separate volatile components of the input data stream from less volatile components, on col. 10, lines 39-59 teaches the received data stream is temporarily stored to interrogate components of the data stream to determine differences to update the server cache with the newer information (col. 10, lines 60-65). Furthermore, Bittinger on col. 27, lines 44-64 teaches the data stream can be divided into separate data streams thru multiplexing and demultiplexing.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Almari Yuan whose telephone number is 571-272-4104. The examiner can normally be reached on Mondays - Fridays (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild, can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AY
February 7, 2005


SANJIV SHAH
PRIMARY EXAMINER